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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/735,826

12/16/2003

Yasuhiko Matsunaga

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EXAMINER

NGUYEN, TU X

ART UNIT

PAPER NUMBER

2618

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/735,826	<b>Applicant(s)</b> MATSUNAGA, YASUHIKO	
	<b>Examiner</b> TU X. NGUYEN	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 19-26, 34-40, 45-48, 57, 60, 61 and 63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 19-26, 34-40, 45-48, 57, 60, 61 and 63 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed 10/28/08 have been fully considered but they are not persuasive.

In response to Applicant argue Bergqvist instructs user equipment, such as mobile terminals, to use other cells, with different frequencies, so as to avoid further congesting a congested frequency, This is not the same thing as the recited limitation of claim 1 in which the frequency a base station utilizes is controlled based on the total received levels of other base stations that use the same frequency by the radio base, the Examiner disagrees, Bergqvist discloses “The information can be presented either by means of restricted accesses or by means of **permitted accesses** for the user equipments with regard to the congested cell and those neighbour cells using the **same** or another **carrier frequency**. The radio base station of a congested cell sends this call admission information on its broadcast channel, block 24. Said additional call admission information, which is an object of the present invention, can refer to a restricted or **permitted access** either for other carrier frequencies or for **other cells using the same carrier frequency**”

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(par.025). Regardless permitted accesses using another carrier frequency (the Examiner does not rely on),\_Bergqvist teaches permitted access for other cells using the same carrier frequency; therefore, meets cited limitation of independent claims.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 19-21, 25-26, 34-37, 45, 57, 60-61 and 63 rejected under 35 U.S.C. 102(b) as being anticipated by Bergqvist (US Pub. 20010005359).

Regarding claim 1, Bergqvist discloses a radio-resource management method comprising a control step of, based on radio-link quality information, including at least a received level of a radio link, to be notified from at least one of a plurality of radio base stations and radio terminals belonging to respective different operators (see par.023-024), taking alteration control of a frequency that said radio base station utilizes on the basis of total received levels of other base stations (see par.008) that use the same frequency used by said radio base station (see par.025).

Regarding claims 2 and 26, Bergqvist discloses said radio-resource management method characterized in that said radio-link quality information includes at least the received

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level of the radio link and a quantity of interference with a neighboring radio system, and that said control step has a step of, in the event that a total of the received levels of the other base stations utilizing a frequency identical to the frequency that said radio base station currently utilizes is larger than a total of the received levels of other base stations in the frequency other than the frequency that is currently utilized, out of the frequency that said radio base station can utilize, taking control so as to make an alteration to the frequency other than said frequency that is currently utilized (see par.025).

Regarding claim 19, Bergqvist discloses a radio-resource management method comprising a control step of, based on radio-link quality information, including at least a received level of a radio link, to be notified from at least one of a plurality of radio base stations and radio terminals belonging to respective different operators, detecting an interference state between the operators to take fault- notification control according to this detected result, and, taking alteration control of a frequency that said radio base station utilizes on the basis of total received levels of other base stations that use the same frequency used by said radio base station (see par. 023-025).

Regarding claims 20 and 35, Bergqvist discloses in the event that radio interference having a pre-specified value or more from the other radio operator was detected within a network of a certain radio operator, making fault notification to a network management server of the radio operator that is an interference source (see par.025).

Regarding claims 21 and 36, Bergqvist discloses in addition to said fault notification, making notification of anyone of an interference quantity, a transmitted-power quantity that

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the radio base station should attenuate, and a frequency that the radio base station should alter, or a combination thereof as well (see par.025).

Regarding claim 25, Bergqvist discloses a radio-resource management apparatus comprising controller for, based on radio-link quality information, including at least a received level of a radio link, to be notified from at least one of a plurality of radio base stations and radio terminals belonging to respective different operators, taking alteration control of a frequency that said radio base station utilizes on the basis of total received levels of other base stations that use the same frequency used by said radio base station (see par.023-025).

Regarding claim 34, Bergqvist discloses a radio-resource management apparatus comprising controller for, based on radio-link quality information, including at least a received level of a radio link, to be notified from at least one of a plurality of radio base stations and radio terminals belonging to respective different operators, detecting an interference state between the operators to take fault- notification control according to this detected result, and, taking alteration control of a frequency that said radio base station utilizes on the basis of total received levels of other base stations that use the same frequency used by said radio base station (see par.023-025).

Regarding claim 37, Bergqvist discloses a radio base station in a wireless network system including a radio-resource management apparatus for managing a radio resource, and radio base stations belonging to a plurality of respective different radio operators, said radio base station comprising: means for measuring a quality of a radio link, including at least a received level of a radio link, and notifying radio-link quality information that is this measured result to said radio-resource management apparatus; and means for, in reply to

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alteration-control notification of a frequency based on said measured result from said radio-resource management apparatus, taking alteration control of a service frequency on the basis of total received levels of other base stations using that use the same frequency used by said radio base station (see par.023-025).

Regarding claim 45, Bergqvist discloses a radio terminal in a wireless network system including a radio-resource management apparatus for managing a radio resource, and radio base stations belonging to a plurality of respective different radio operators, said radio terminal comprising: means for measuring a quality of a radio link, including at least a received level of a radio link, and notifying radio-link quality information that is this measured result to said radio-resource management apparatus; and means for, in reply to alteration-control notification of a frequency based on said measured result from said radio-resource management apparatus, taking alteration control of a service frequency on the basis of total received levels of other base stations ~ that use the same frequency used by said radio base station (see par.023-025).

Regarding claims 57 and 60-61 and 63, Bergqvist discloses a computer-readable medium storing a program for causing a computer to execute a control operation of a radio-resource management apparatus in a wireless network system (software program is inherent), said program characterized in including a frequency control step of, based on radio-link quality information, including at least a received level of a radio link, to be notified from at least one of radio base stations and radio terminals belonging to respective different operators, taking alteration control of a frequency that said radio base station utilizes on the

basis of total received levels of other base stations that use the same frequency used by said radio base station (see par.023-025).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5, 22-24, 38-40 and 46-48, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergqvist (US Pub. 20010005359) in view of Laakso (US Pub. 2003/0003921).

Regarding claims 3, 22, 38 and 46, Bergqvist fails to disclose radio-link quality information is notified at a predetermined notification period.

Laakso discloses radio-link quality information is notified at a predetermined notification period (see par.064). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Bergqvist with the above teaching of Laakso in order to provide information report schedule period in order to make right decisions (as suggested by Laakso, par.0140).

Regarding claims 4-5, 23-24, 39-40 and 47-48, the modified Bergqvist discloses in the event that a link quality of the radio link exceeded a predetermined threshold, said notification period is set to be longer than it is set in the event that it is equal to or less than said threshold (see Laakso, par.064, 0140).



### **Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Nguyen whose telephone number is 571-272-7883.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system,

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see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tu X Nguyen/

Examiner, Art Unit 2618

1/12/09